

Unicorns in Peril

VIBHAV SRIVASTAVA



MYTHICAL unicorns (horse-like creatures with a horn on the forehead) are said to possess magical powers. We have numerous fairy tales giving vivid descriptions of these creatures. But let us not forget about a real-life unicorn that roams in our country in blood and bones suffering the wrath of our negligence and carnage of our greed.

The Indian Rhinoceros or Great One-Horned Rhinoceros (*Rhinoceros unicornis*) is often in the news when it loses the battle for its survival to ruthless poachers who consider its horn invaluable. Rhino horns are of great value in traditional Chinese medicine for having aphrodisiac properties, which is a myth, as it is made of keratin protein that also makes our nails, hair and skin.

Indian rhinos are protected as Schedule I species under the Wildlife (Protection) Act, 1972 of India. They were once iconized in our 50-paisa coins. With growing economy these coins became obsolete and extinct. However, worldwide with the success of rhino conservation programmes these animals jumped from the Endangered to the Vulnerable category in IUCN Red List

in 2010. In the Indian scenario, although the population has risen, yet it constantly suffers from intense pressure of poaching and habitat destruction.

It is one of the five extant species of rhinos representing a prehistoric guild which survived the test of time and calamities of nature. The other four species of rhinos are two African – white rhinoceros (*Ceratotherium simum*) and Black rhinos (*Diceros bicornis*), and two Asian – Javan rhinoceros (*Rhinoceros sondaicus*) and Sumatran rhinoceros (*Dicerorhinus sumatrensis*).

Archeological evidences suggest that Indian rhinos once used to roam all over the Terai – Duars of Brahmaputra, Ganga and Indus extending from North-East India and Nepal to Pakistan. Mughal emperor Babur used to keep tamed rhinos in his army. Their indiscriminate killing and clearing of their natural habitats for agriculture reduced their population drastically in the colonial era to merely a few hundreds. The last rhino of Uttar Pradesh was shot in Pilibhit in 1878.

After a few commendable and efficient conservation programmes launched in India and Nepal, such as rehabilitation projects in Dudhwa National Park in Uttar Pradesh, Manas National Park in Assam and the Royal Bardia National Park in Nepal, at present around 2800 rhinos exist in protected

areas of India and Nepal. The Kaziranga National Park in Assam and the Royal Chitwan National Park in Nepal together hold more than fifty percent of the remaining free living populations of Indian rhinos. A few also thrive in the states of West Bengal, Uttar Pradesh and Bihar.

However grotesque and bulky, these deep slate-grey colored Indian rhinos fall second to African white rhinos in size ranging from around 2000 kg in males and about 1500 kg in females by weight. They have a characteristic single horn on the top of the head between the nostrils. It is a cluster of tightly clumped hair and hence not hollow inside as usual horns of bovids are.

Their skin possesses rivet-like tubercles and is folded at various places giving the appearance as if the animal is wearing armor. The more enigmatic the animal is the more myths are associated with it. In yet another hoax, it is said that rhinos are bulletproof. In a ridiculous case of rhino hunting in Assam, the hunter claimed that he shot at the rhino only to verify if it was really bulletproof as he had been told!

Nevertheless, their skin is thick but extremely sensitive to heat and sunburn. This is one of the reasons why most rhinos are seen wallowing in a pond or lake to cool off and prevent their skin



Above left: Wallowing rhino
Above: Indian rhino footprint:
Notice three curved hoof marks
Left: Camera trap image
showing a rhino visiting a
community defecation site.

What if population of Rhinos reduces to those unrecoverable levels and we find their true value to mankind?

from sunburns. Other reasons being ectoparasite prevention, changing taste with aquatic plants in the menu and salt-licks in certain cases.

Ecologically, rhinos are known as typical grassland species spending most of the time munching soft young grasses and herbs in the grasslands of Terai. But they do use woodlands as thermal cover in extreme cold winters. A study from Nepal revealed their likeness for fruits of *Trivia nudiflora* which has since then been called rhino apple. It also linked the significant role of these pachyderms in apple seed dispersal.

Rhinos are solitary by nature. However, one may find countable individuals present close to each other at some times while foraging or wallowing. These are mere chance congregations and should not be confused with social herd living as elements of society and cohesion are absent. The only extent of cohesion was found in some mating pairs or mother and young calves. Mother and calf stay together for about 2-3 years till the calf matures enough to live independently.

Despite having dagger-like horns, rhinos hardly use them for offence and

defense. Instead they bite off chunks of flesh from their opponent's body using their sharp teeth. Survivors of encounters with rhinos have told that they try to bite rather than pierce the horn while attacking. Thus, breaking another propounded myth that the rhino knocks by its horns. However, African cousins like black rhinos do use their horns when annoyed.

Being Perissodactyle or odd-toed, they leave behind imprint of three hoofs and a foot-pad on the loose soil of forest tracks. There is a terminal pore at the back of their foot called the foot gland which is supposed to produce scent for marking a scent trail when they walk. Rhinos are mostly observed walking with their head down perhaps sniffing the scent as they follow the same trail in the seemingly impregnable tall grasslands as made by other rhinos.

Indian rhinos use various forms of vocalization to convey their emotions. They snarl or snort making fu-fu-fu sound when disturbed as warning of aggression. During fight, which is a normal phenomenon between males for mating opportunity, one can hear them

honking and roaring in intense belligerent behaviour. Similar squeaking sound is made by a male while chasing a female for mating.

The breeding ritual is bizarre where the female tests the caliber of the male by running long distances. The male has to follow the female till she gets exhausted and stops running. If the male stops in between, it loses its mating chance. The sexual congress lasts for an hour following which, if conceived, the gestation will continue for sixteen months giving birth to a single helpless calf.

Rhinos have a peculiar habit of defecating at community defecation sites called middens. The midden starts when one initiator rhino defecates at a place while all nearby rhinos and the initiator itself defecate at that same place again and again. Many dung piles were seen to attain huge size with time. It is still a mystery why such a behaviour evolved and what is its significance but it has been shown that it does not account for territoriality between individuals. An interesting observation by a biologist in Nepal suggests that the odor of dung compels the passerby rhino to defecate at the same site.

Although studies are going on to understand the ecology and behaviour of these mega herbivores better, the greatest concern today is that, at this unprecedented rate of killing and population decline, what if we lose every individual before we can even unfold their greatest ecological mysteries? What if the population reduces to those unrecoverable levels and we find their true value to mankind?

Now is the time when these beautiful creatures require our attention. Laudable government initiatives, relentless efforts of NGO's like WWF, Aaranyak, WTI, etc. and joint ventures such as Indian Rhino Vision 2020 (aiming at 3000 plus individuals in India by the year 2020) are encouraging.

However, people's participation is necessary so that future generations can witness these charismatic species in their natural habitats.

Mr Vibhav Srivastava is M.Sc. from the Wildlife Institute of India, Dehradun and has worked on the Greater one-horned rhinoceros (*Rhinoceros unicornis*) population in Dudhwa National Park, Uttar Pradesh. Address: 914/351/231-D, Sultanpur Bhawa, Ganga Ganj, Allahabad-211016; Email: 1729vibhav@gmail.com